

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
21 October 2004 (21.10.2004)

PCT

(10) International Publication Number
WO 2004/089181 A3

(51) International Patent Classification⁷: **A61B 17/15**

(74) Agent: SHELSTON IP; 60 Margaret Street, Sydney NSW 2000 (AU).

(21) International Application Number:
PCT/AU2004/000486

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date: 14 April 2004 (14.04.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2003901738 14 April 2003 (14.04.2003) AU

(71) Applicant (*for all designated States except US*): NILNAV ORTHOPAEDICS PTY LIMITED [AU/AU]; 491 Westlake Drive, Riverhills, QLD 4074 (AU).

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

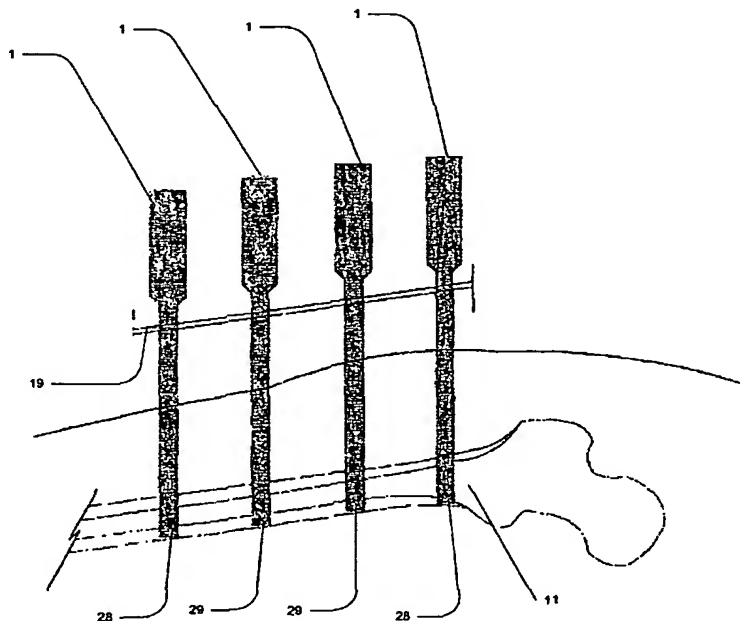
(72) Inventors; and

(75) Inventors/Applicants (*for US only*): SHERRY, Eugene [AU/AU]; 108 Lethbridge Street, Penrith, NSW 2750 (AU). EGAN, Michael [AU/AU]; 62 Tulloch Street, Blacktown, NSW 2148 (AU). LYE, Bob [AU/AU]; 6 Roger Street, Brookvale, NSW 2100 (AU).

Published:
— with international search report

[Continued on next page]

(54) Title: A SUPPORT ARRANGEMENT FOR USE IN SUPPORTING A BONE DURING A SURGICAL OPERATION



(57) Abstract: A support arrangement for use in supporting a bone (11) during a surgical operation. The arrangement includes one or more supports (1) located by a guide means (19), each support including means (6, 7) to fit around and support said bone during said operation.

WO 2004/089181 A3



(88) Date of publication of the international search report:
24 March 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU2004/000486

A. CLASSIFICATION OF SUBJECT MATTER

Int. Cl. 7: **A61B 17/15**

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

DWPI: key words (bone, femur, remove, cement, bonding material, support, clamp, chisel etc)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|--|-----------------------|
| X | US 6258095 B1 (LOMBARDO et al) 10 July 2001 See entire document | 1-3, 18-20 |
| X | WO 96/07361 A1 (HUDSON SURGICAL DESIGN, INC) 14 March 1996 See entire document | 1-6, 18-23 |
| X | EP 0552578 B1 (BERGUE) 9 July 1997 See entire document | 1-6, 18-22 |
| X | US 6258096 B1 (SEKI) 10 July 2001 See entire document | 1-3, 18-23 |

☒ Further documents are listed in the continuation of Box C ☒ See patent family annex

| | |
|---|--|
| * Special categories of cited documents: | "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention |
| "A" document defining the general state of the art which is not considered to be of particular relevance | "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone |
| "E" earlier application or patent but published on or after the international filing date | "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art |
| "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) | "&" document member of the same patent family |
| "O" document referring to an oral disclosure, use, exhibition or other means | |
| "P" document published prior to the international filing date but later than the priority date claimed | |

| | |
|--|---|
| Date of the actual completion of the international search 6 August 2004 | Date of mailing of the international search report 10 NOV 2004 |
| Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustalia.gov.au Facsimile No. (02) 6285 3929 | Authorized officer SWAYAM CHINTAMANI Telephone No : (02) 6283 2202 |

INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU2004/000486

| C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT | | |
|---|--|-----------------------|
| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
| X | US 5312409 A (MCLAUGHLIN et al) 17 May 1994 See entire document | 1-8, 18-23 |
| X | US 5885298 A (HERRINGTON et al) 23 March 1999 See figures 2, 10-12 | 1-3 |
| A | US 5713906 A (GROTHUES-SPORK et al) 3 February 1998 See abstract | 15-17 |

INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU2004/000486

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a)

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

See Extra Sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☒ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU2004/000486

Supplemental Box

(To be used when the space in any of Boxes I to VIII is not sufficient)

Continuation of Box No: III

The international application does not comply with the requirements of unity of invention because it does not relate to one invention or to a group of inventions so linked as to form a single general inventive concept. In coming to this conclusion the International Searching Authority has found that there are different inventions as follows:

1. Claims 1, 2-14, 18-23 are related to a support arrangement during a surgical operation. It is considered that applying at least one support means to support the structure of the bone comprises a first "special technical feature".
2. Claims 15-17 are related to a surgical chisel. It is considered that a hollow portion adjacent a cutting end having tapering internal walls comprises a second special technical feature.

Since the abovementioned groups of claims do not share any of the technical features identified, a "technical relationship" between the inventions, as defined in PCT rule 13.2 does not exist. Accordingly the international application does not relate to one invention or to a single inventive concept, a priori.

The International Searching Authority believes that a search and examination for the second invention will not involve more than a little additional search and examination effort over that for the first invention and so no additional search fee is required in order to search and examine that invention.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/AU2004/000486

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

| Patent Document Cited in Search Report | | | | Patent Family Member | | | |
|---|---------|----|------------|----------------------|----------|----|------------|
| US | 6258095 | EP | 0947169 | JP | 11313844 | US | 2001001121 |
| WO | 9607361 | AU | 19615/97 | AU | 21257/97 | AU | 35432/95 |
| | | CA | 2198915 | EP | 0778751 | EP | 0888089 |
| | | US | 5514139 | US | 5597379 | US | 5643272 |
| | | US | 5755803 | US | 5810827 | US | 5879354 |
| | | US | 6056754 | US | 6197064 | US | 2002029038 |
| | | WO | 9729703 | WO | 9729704 | | |
| EP | 0552578 | FR | 2685855 | | | | |
| US | 6258096 | JP | 2000287983 | | | | |
| US | 5312409 | | | | | | |
| US | 5885298 | | | | | | |
| US | 5713906 | AU | 67956/94 | DE | 4416377 | WO | 9426176 |
| Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001. | | | | | | | |
| END OF ANNEX | | | | | | | |